

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference  28615	<b>FOR FURTHER ACTION</b> <div style="float: right; font-size: small;">see Form PCT/ISA/220 as well as, where applicable, item 5 below.</div>	
International application No.  PCT/IL2005/000010	International filing date (day/month/year)  04/01/2005	(Earliest) Priority Date (day/month/year)  15/01/2004
Applicant  ELOP ELECTROOPTICAL INDUSTRIES LTD.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☒ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 3

☐ as suggested by the applicant.

☒ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

## INTERNATIONAL SEARCH REPORT

International application No.  
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### Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

### Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

#### Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

**FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210**

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-6

A constant current power supply for a laser diode comprising means to protect an attached laser diode from over-current spikes.

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2. claims: 7-15

A power supply for charging a capacitive load comprising an inductance connected in series with the capacitive load and feedback means for controlling the series impedance of the capacitive load and the inductance to maintain the charging current of the capacitive load at a predetermined level.

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# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IL2005/000010

**A. CLASSIFICATION OF SUBJECT MATTER**  
IPC 7 H01S5/068

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 H01S

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ, INSPEC, COMPENDEX, IBM-TDB

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2003/063641 A1 (JOHNSON RONALD E) 3 April 2003 (2003-04-03) figure 5 paragraph '0005! - paragraph '0008! paragraph '0029! - paragraph '0031!	1,3,5
Y	-----	2,4,6
Y	US 4 872 080 A (HENTSCHEL ET AL) 3 October 1989 (1989-10-03) abstract; figure 2 ----- -/--	2,4,6

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

26 August 2005

Date of mailing of the international search report

12.09.05

Name and mailing address of the ISA

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Authorized officer

Meacher, D

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International Application No  
PCT/IL2005/000010

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	ANONYMOUS: "Improved driver circuit for semiconductor laser" RESEARCH DISCLOSURE, KENNETH MASON PUBLICATIONS, HAMPSHIRE, GB, vol. 249, no. 4, January 1985 (1985-01), XP007109683 ISSN: 0374-4353 the whole document -----	2,4,6
A	HANKS R L ET AL: "Integrated power conditioning for laser diode arrays" 1995 PULSED POWER CONFERENCE. ALBUQUERQUE, JULY 3 - 6, 1995, PULSED POWER CONFERENCE, NEW YORK, IEEE, US, vol. VOL. 2, 3 July 1995 (1995-07-03), pages 928-933, XP010227789 ISBN: 0-7803-2791-8 page 929 -----	1,6
A	US 4 074 334 A (D'ARRIGO ET AL) 14 February 1978 (1978-02-14) figure 2 -----	1,6
A	EP 0 596 357 A (EASTMAN KODAK COMPANY) 11 May 1994 (1994-05-11) figure 1 -----	1,6
X	LIPPINCOTT A C ET AL: "A CAPACITOR-CHARGING POWER SUPPLY USING A SERIES-RESONANT TOPOLOGY, CONSTANT ON-TIME/VARIABLE FREQUENCY CONTROL, AND ZERO-CURRENT SWITCHING" IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, IEEE INC. NEW YORK, US, vol. 38, no. 6, 1 December 1991 (1991-12-01), pages 438-447, XP000275832 ISSN: 0278-0046 abstract; figures 2,3 page 440, right-hand column, line 9 - line 25 -----	7,8,11
A	POLLOCK H: "Constant frequency, constant currentload-resonantcapacitor charging power supply" IEE PROCEEDINGS: ELECTRIC POWER APPLICATIONS, INSTITUTION OF ELECTRICAL ENGINEERS, GB, vol. 146, no. 2, 10 March 1999 (1999-03-10), pages 187-192, XP006013357 ISSN: 1350-2352 page 189, right-hand column - page 190, left-hand column; figures 3,4 -----	7,8,11
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# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/IL2005/000010

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>STEIGERWALD R L: "A COMPARISON OF HALF-BRIDGE RESONANT CONVERTER TOPOLOGIES" IEEE TRANSACTIONS ON POWER ELECTRONICS, IEEE INC. NEW YORK, US, vol. 3, no. 2, April 1988 (1988-04), pages 174-182, XP000858941 ISSN: 0885-8993 the whole document</p> <p>-----</p>	7-15

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IL2005/000010

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 2003063641	A1	03-04-2003	NONE		
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US 4872080	A	03-10-1989	DE	3331132 C1	07-02-1985
			JP	1684467 C	31-07-1992
			JP	3048674 B	25-07-1991
			JP	60068683 A	19-04-1985
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US 4074334	A	14-02-1978	IT	1049596 B	10-02-1981
			DE	2642146 A1	31-03-1977
			FR	2325193 A1	15-04-1977
			GB	1514400 A	14-06-1978
			JP	1486062 C	14-03-1989
			JP	52059834 A	17-05-1977
			JP	61055803 B	29-11-1986
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EP 0596357	A	11-05-1994	US	5276697 A	04-01-1994
			DE	69322484 D1	21-01-1999
			DE	69322484 T2	24-06-1999
			EP	0596357 A1	11-05-1994
			JP	2716654 B2	18-02-1998
			JP	6227036 A	16-08-1994
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